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Subject: **Zeta Solar Generation and Battery Energy Storage System Project Notice or Preparation (NOP)**
State Clearinghouse No. 2023070088

Dear Valerie Dalley:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) from the County of Merced Department of Community and Economic Development (County of Merced), as Lead Agency, for the Zeta Solar Generation and Battery Energy Storage System Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species was previously prohibited and CDFW was not able to authorize their incidental take. Senate Bill No. 147 (SB 147), which became effective on July 1, 2023, amended Fish and Game Code sections 3511, 4700, 5050, and 5515 to authorize CDFW to issue a permit under CESA that authorizes the take of a fully protected species resulting from impacts attributable to the implementation of specified projects, which includes industrial solar photovoltaic projects, if certain conditions are satisfied.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs, and nests include 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

As a responsible agency, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and

wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

PROJECT DESCRIPTION SUMMARY

Proponent: Longroad Development Company, LLC

Objective: The Project proposes to construct and operate a photovoltaic solar power generation facility with a battery energy storage system (BESS) that would generate up to approximately 75 megawatts (MW) of renewable electrical energy and include an energy storage capacity of up to 8 hours of 75 MW. The 650-acre Project also includes the construction of a 1,700-foot-long generation-tie line to deliver power from the Project to Pacific Gas and Electric's existing Mercy Springs Substation.

Location: The Project is located on privately-owned land in southwestern Merced County, approximately 9 miles south of Los Banos. The Project generation facility would occupy all or portions of three parcels identified by Merced County as Assessor Parcel Numbers (APNs) 090-130-018, 090-130-044, and 090-130-060. The gen-tie line would extend north through APN 088-180-063 to the point of interconnection in APN 090-103-059. Poleline Road abuts the southwestern Project site boundary. The California Aqueduct and U.S. Interstate 5 (I-5) run parallel to the southwest Project boundary about 300 feet and 800 feet to the west of the Project site, respectively. First Lift Canal Road lies along the western boundary of the Project site, and the eastern boundary abuts an unnamed dirt/gravel road.

Timeframe: Undetermined.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County of Merced in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the Draft EIR.

Aerial imagery of the Project boundary and its surroundings show the area contains several natural and agricultural habitats including annual grassland, cultivated wheat, and fallow fields, which may have suitable habitat for special status species. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDB) records, and the surrounding habitat, several special status species could potentially be impacted by Project activities.

The Project site is within the geographic range of several special status animal species including the State and federally endangered giant kangaroo rat (*Dipodomys* ingens);

the State threatened San Joaquin [Nelson's] antelope squirrel (*Ammospermophilus nelsoni*); the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State fully protected golden eagle (*Aquila chrysaetos*); the State threatened Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius tricolor*); the State fully protected and endangered, and federally endangered, blunt-nosed leopard lizard (*Gambelia sila*); the State candidate for listing as endangered Crotch's bumble bee (*Bombus crotchii*); the State species of special concern American badger (*Taxidea taxus*), burrowing owl (*Athene cunicularia*), mountain plover (*Charadrius montanus*), northern harrier (*Circus hudsonius*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), and western spadefoot (*Spea hammondii*); and the State watch list species cackling [Aleutian Canada] goose (*Branta hutchinsii leucopareia*), California horned lark (*Eremophila alpestris actia*), and prairie falcon (*Falco mexicanus*).

Additionally, the Project site is within the geographic range of several special status plant species including the California Rare Plant Rank (CRPR) 1B.2 California alkali grass (*Puccinellia simplex*); the CRPR 1B.1 hispid salty bird's-beak (*Chloropyron molle ssp. hispidum*); the CRPR 4.2 Hoover's eriastrum (*Eriastrum hooveri*); and the CRPR 1B.2 Lemmon's jewelflower (*Caulanthus lemmonii*) and recurved larkspur (*Delphinium recurvatum*). Finally, the Project is within the geographic range of many migratory and non-migratory nesting birds.

Giant Kangaroo Rat

The Project site is within the known geographic range of giant kangaroo rat (GKR) and there is a historical occurrence approximately 1.5 miles southeast of the Project (CDFW 2023a). GKR are known to inhabit areas with sandy-loam soils with gentle slopes vegetated with annual grasses and scattered shrubs (ESRP 2020). As noted in the NOP, the Project site contains a mix of native and non-native grasses and has not had active crop cultivation since 2018. As such, GKR have the potential to occupy the habitats within the Project site.

CDFW recommends that a qualified biologist conduct a habitat assessment for GKR within the Project site as part of the biological studies conducted in support of the Draft EIR. If suitable habitat is determined to be present, CDFW recommends that a qualified wildlife biologist conduct focused protocol-level trapping surveys for GKR as part of the biological studies conducted in support of the Draft EIR. Prior to conducting these surveys, CDFW recommends that a trapping plan for determining presence of GKR and surveyor qualifications be submitted to and approved by CDFW. If surveys indicate the presence or potential presence of GKR, and reasonable measures to avoid take are not feasible, CDFW recommends the Project obtain take authorization through the acquisition of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b) to comply with CESA.

San Joaquin [Nelson's] Antelope Squirrel

The Project site is within the known geographic range of San Joaquin [Nelson's] antelope squirrel (SJAS) and there is a historical occurrence located approximately one mile south of the Project (CDFW 2023a). Suitable SJAS habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows. As noted in the NOP, the Project site contains a mix of native and non-native grasses and has not had active crop cultivation since 2018. As such, SJAS have the potential to occupy the habitats within the Project site.

CDFW recommends that a qualified biologist conduct a habitat assessment for SJAS within the Project site as part of the biological studies conducted in support of the Draft EIR. If suitable habitat is determined to be present, CDFW recommends that a qualified biologist conduct focused daytime visual surveys for SJAS in areas of suitable habitat as part of the biological studies conducted in support of the Draft EIR. If surveys indicate the presence or potential presence of SJAS, and reasonable measures to avoid take are not feasible, CDFW recommends the Project obtain take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) to comply with CESA.

San Joaquin Kit Fox

The Project site is within the known geographic range of San Joaquin kit fox (SJKF), a historical occurrence is present within the Project footprint, and multiple recent occurrences have been documented within the immediate project vicinity (CDFW 2023a). SJKF den in a variety of areas such as arid grassland and alkali scrub/shrub habitats in open areas with sandy soils (Grinnel et al. 1937), agricultural and fallow/ruderal habitat, and dry stream channels, and populations can fluctuate over time. SJKF may be attracted to Project sites due to the type and level of ground disturbing activities and the loose, friable soils resulting from intensive ground disturbance. Based on aerial imagery and the information provided in the NOP, most of the Project site contains suitable habitat for SJKF denning and foraging.

As SJKF have a high potential to den and/or forage within the Project site and have been documented within the Project footprint, CDFW recommends that a qualified biologist assess the presence/absence of SJKF by conducting focused surveys to detect SJKF and their sign in all Project sites and a 500-foot buffer of Project sites as part of the biological studies conducted in support of the Draft EIR. In addition to the focused SJKF surveys, CDFW recommends the Draft EIR include the following measures:

Recommended Mitigation Measure 1: SJKF Avoidance Buffer

CDFW recommends implementing no-disturbance buffers, as described in the USFWS' "Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance" (2011) (USFWS Protocol) around potentially suitable or known SJKF den sites. If the no-disturbance buffers outlined in the USFWS Protocol cannot be maintained, then consultation with CDFW is warranted to determine if the Project can avoid take or if take authorization is necessary as described below.

Recommended Mitigation Measure 2: SJKF Take Authorization

If the no-disturbance buffers outlined in the USFWS Protocol for SJKF are not feasible, CDFW recommends that consultation with CDFW occur to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

Golden Eagle

The fully protected golden eagle has the potential to nest and/or forage in the Project vicinity (CDFW 2023a). CDFW recommends that a qualified biologist conduct a habitat assessment for fully protected raptors within the Project site and a 0.5-mile buffer surrounding the Project site as part of the biological studies conducted in support of the Draft EIR. If suitable habitat is determined to be present, CDFW recommends that focused surveys be conducted for golden eagle, and that surveys be conducted in accordance with protocols developed by the United States Fish and Wildlife Service (USFWS 2010) for golden eagle, as part of the biological technical studies. If surveys indicate the presence or potential presence of fully protected raptors, consultation with the CDFW is recommended for guidance on the development of take avoidance measures. If reasonable measures to avoid take are not feasible, CDFW recommends seeking take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081(b) and as authorized by SB 147.

Swainson's Hawk

The Project is within the known geographic range of Swainson's hawk (SWHA), and a recent occurrence has been documented approximately 1.8 miles northwest of the Project site (CDFW 2023a). SWHA are known to breed within the Central Valley of California and prefer to nest and forage in alfalfa, fallow fields, field crops, and grassland habitats with a sufficient source of small mammals (CDFG 1994). Based on aerial imagery and the information provided in the NOP, most of the Project site

contains suitable habitat for SWHA foraging. In addition, there are trees and structures located within the vicinity of the Project site that may provide suitable nesting habitat.

As SWHA have a high potential to use the Project site and have been documented within the Project vicinity, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the entire survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) as part of the biological technical studies conducted in support of the Draft EIR.

In addition to conducting SWHA surveys, CDFW recommends the Project mitigate for loss of SWHA foraging habitat as described in Recommended Mitigation Measure 6 below. In addition, CDFW recommends the Draft EIR include the following measures:

Recommended Mitigation Measure 3: SWHA Surveys Prior to Construction

Depending on the time between the initial survey efforts conducted in support of the Draft EIR and project construction, CDFW recommends that additional surveys, following the survey methodology developed by the SWHA Technical Advisory Committee, be repeated the survey season immediately prior to construction.

Recommended Mitigation Measure 4: SWHA Avoidance Buffer

If Project-specific activities will take place during the SWHA nesting season (i.e., March 1 through September 15), and active SWHA nests are present, CDFW recommends a minimum ½-mile no-disturbance buffer be delineated and maintained around each nest, regardless of whether it was detected by surveys or observed incidentally. These buffers would remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take of SWHA as a result of Project activities.

Recommended Mitigation Measure 5: SWHA Take Authorization

CDFW also recommends that in the event an active SWHA nest is detected, and a ½-mile no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

Recommended Mitigation Measure 6: SWHA Foraging Habitat Mitigation

Finally, CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's

Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development is advised.

Tricolored Blackbird

The Project site is within the known geographic range of tricolored blackbird (TRBL) and a historical occurrence has been approximately 3.3 miles northeast of the Project site (CDFW 2023a). TRBL breed within the vicinity of fresh water, primarily in marshy areas. Important sites for nesting colonies include heavy growths of cattails, tules, thistles, willows, blackberries, mustard, nettles, and salt cedar. They typically forage within flooded lands, grassy fields, and margins of ponds (Grinnel and Miller 1944). Based on aerial imagery and the information provided in the NOP, the grassland habitats within the Project site could provide potential foraging habitat.

CDFW recommends that a qualified biologist conduct a habitat assessment as part of the biological technical studies conducted in support of the Draft EIR. If potentially suitable habitat is identified, consultation with CDFW is recommended for guidance on focused survey methods and mitigation measures such avoidance, take authorization, and mitigation.

Blunt-nosed Leopard Lizard

The Project site is within the known geographic range of blunt-nosed leopard lizard (BNLL), and historical occurrences have been documented directly west of the Project site on the west side of I-5 (CDFW 2023a). Suitable BNLL habitat includes areas of grassland and upland scrub that contain requisite habitat elements, such as small mammal burrows. BNLL also use open space patches between suitable habitats, including disturbed sites, unpaved access roadways, and canals. As noted in the NOP, the Project site contains a mix of native and non-native grasses and has not had active crop cultivation since 2018. As such, BNLL could potentially occupy the habitats within the Project site.

As BNLL have the potential to occupy the Project site and have been documented within the Project vicinity, CDFW recommends that a qualified biologist conduct protocol surveys in accordance with the "Approved Survey Methodology for the Blunt-nosed Leopard Lizard" (CDFW 2019) as part of the biological technical studies conducted in support of the Draft EIR. This survey protocol, designed to optimize BNLL detectability, reasonably assures CDFW that ground disturbance will not result in take of this fully protected species.

In addition to conducting BNLL surveys, CDFW recommends the Draft EIR include the following measures:

Recommended Mitigation Measure 7: BNLL Surveys Prior to Construction

Depending on the time between the initial survey efforts conducted in support of the Draft EIR and project construction, CDFW recommends that additional surveys, following the "Approved Survey Methodology for the Blunt-nosed Leopard Lizard" (CDFW 2019) survey methodology be repeated the survey season immediately prior to construction.

Recommended Mitigation Measure 8: BNLL Avoidance Buffer

CDFW recommends that any BNLL detection, known or potentially occupied burrows, or egg clutch sites have a minimum 395-acre buffer. This buffer is based on unpublished data from Dr. David Germano documenting that "male BNLL have home ranges up to 52 acres and that female BNLL have home ranges exceeding 98 acres, the known maximum home range sizes observed for the species, the unknown specific footprint of the individual BNLL's home range relative to where the lizard was observed on the surface, and the unknown location of the lizard underground when construction commences."

Given the size of the buffer recommendation outlined above relative to the overall size of the proposed Project, CDFW recommends the following if Project activities are anticipated to occur within or near occupied BNLL habitat:

Recommended Mitigation Measure 9: BNLL Take Authorization

With the passage of Senate Bill No. 147, the incidental take of BNLL may be authorized for certain categories of projects, including industrial solar photovoltaic projects. If BNLL protocol surveys find that the Project site is occupied, or the Project chooses to assume presence for BNLL, consultation with CDFW is recommended to discuss how to implement the Project and avoid take; or if avoidance is not feasible, to potentially acquire an ITP prior to any ground disturbing activities, pursuant Fish and Game Code section 2081 subdivision (b).

Crotch's Bumble Bee

The Project site is within the known geographic range of Crotch's bumble bee (CBB) and a historical occurrence was documented approximately 9 miles northeast of the Project site (CDFW 2023a). CBB are known to inhabit areas of grasslands and scrub that contain requisite habitat elements for nesting, such as small mammal burrows and bunch/thatched grasses. CBB was once common throughout most of central and southern California. However, it now appears to be absent from most of their range, especially in the central portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years. As noted in the NOP, the Project site contains a mix of native and non-native grasses and has not had active crop cultivation since 2018. As such, CBB could potentially use the habitats within the Project site for foraging or nesting.

CDFW recommends a qualified biologist conduct a habitat assessment as part of the biological technical studies conducted in support of the Draft EIR to determine if the Project site or its immediate vicinity contain habitat suitable to support CBB. Potential nesting sites, which include all small mammal burrows, perennial bunch grasses, thatched annual grasses, brush piles, old bird nests, dead trees, and hollow logs would need to be documented as part of the assessment. If potentially suitable habitat is identified, CDFW recommends that a qualified biologist conduct focused surveys for CBB, and their requisite habitat features following the methodology outlined in the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023b), as part of the biological technical studies conducted in support of the Draft EIR.

In addition to conducting a CBB habitat assessment and surveys, CDFW recommends the Draft EIR include the following measures:

Recommended Mitigation Measure 10: CBB Surveys Prior to Construction

Depending on the time between the initial survey efforts conducted in support of the Draft EIR and project construction, CDFW recommends that additional surveys, following the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023b), be repeated the blooming period immediately prior to construction.

Recommended Mitigation Measure 11: CBB Avoidance Buffer

If surveys cannot be completed, CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the

overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

Recommended Mitigation Measure 12: CBB Take Authorization

If CBB is identified during surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization prior to any ground disturbing activities may be warranted. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b).

American Badger

The Project site is within the known geographic range of American badger (AMBA) and a historical occurrence has been documented approximately 1.7 miles southwest of the Project site (CNDDB 2023). AMBA occupy sparsely vegetated land cover with dry, friable soils to excavate dens, which they use for cover, and that support fossorial rodent prey populations (i.e., ground squirrels, pocket gophers, etc.) (Zeiner et. al 1990). Based on aerial imagery and the information provided in the NOP, most of the Project site contains suitable habitat for AMBA denning and foraging.

As AMBA have the potential to den and/or forage within the Project site, CDFW recommends that a qualified biologist assess the presence/absence of AMBA by conducting a focused field survey in all areas of potentially suitable habitat as part of the biological studies conducted in support of the Draft EIR. If surveys indicate the presence or potential presence of AMBA, consultation with the CDFW is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

Burrowing Owl

The Project site is within the known geographic range of burrowing owl (BUOW) and there are multiple historic and recent occurrences located adjacent to the Project site along the California Aqueduct (CNDDB 2023). BUOW inhabit open grasslands and desert scrublands containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Based on aerial imagery and the information provided in the NOP, most of the Project site contains suitable habitat for BUOW nesting and foraging.

As BUOW have the potential to nest and/or forage within the Project site, CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's (CBOC)

"Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012) as part of the biological studies conducted in support of the Draft EIR.

In addition to conducting BUOW surveys, CDFW recommends the Draft EIR include the following measures:

Recommended Mitigation Measure 13: BUOW Surveys Prior to Construction

Depending on the time between the initial survey efforts conducted in support of the Draft EIR and project construction, CDFW recommends that additional surveys, following the "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012) be repeated the survey season immediately prior to construction.

Recommended Mitigation Measure 14: BUOW Avoidance Buffer

Should a BUOW be detected, CDFW recommends that no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Recommended Mitigation Measure 15: BUOW Passive Relocation and Mitigation

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that according to the Staff Report (CDFG 2012), excluding birds from burrows is not a take avoidance, minimization, or mitigation method and is instead considered a potentially significant impact under CEQA. However, if it is necessary for Project implementation, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-

breeding season, by a qualified biologist, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of one (1) burrow collapsed to one (1) artificial burrow constructed (1:1) to mitigate for evicting BUOW and the loss of burrows. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance at a rate that is sufficient to detect BUOW if they return.

Other State Species of Special Concern

The Project site is within the known geographic range of San Joaquin coachwhip, and western spadefoot and these species have been documented within the areas surrounding the Project (CDFW 2023a).

To evaluate Project-related impacts to these species, CDFW recommends that a general habitat assessment be conducted as part of the biological technical studies conducted in support of the Draft EIR.

Special Status Plant Species

The Project site is within the known geographic range of several special status plant species including California alkali grass, hispid salty bird's-beak, Hoover's eriastrum, Lemmon's jewelflower, and recurved larkspur, and these species have been historically documented within the Project vicinity (CDFW 2023a). The Project site is likely to contain suitable habitat for special status plant species, including the species mentioned above.

CDFW recommends that the Project site(s) be surveyed for special status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities" (CDFW 2018) as part of the biological technical studies conducted in support of the Draft EIR. This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. If surveys indicate the presence or potential presence of special status plants, consultation with CDFW is recommended for guidance on mitigation measures such as avoidance, minimization, and mitigation.

Nesting Birds

The Project site is within the known geographic range of several species of migratory and non-migratory birds, including the State species of special concern mountain plover and northern harrier, and watch list species cackling [Aleutian Canada] goose, California horned lark, and prairie falcon (CDFW 2023a). Additionally, the Project site is

located within a relatively close vicinity of several waterfowl management areas, including the Los Banos Wildlife Area. The Project site may contain suitable habitat for an abundance of nesting migratory and non-migratory bird species, including the species mentioned above, and may provide suitable foraging habitat for several species of waterfowl and shorebirds, including mountain plover and cackling goose.

To evaluate Project-related impacts on nesting birds and foraging special status bird species, CDFW recommends that a general habitat assessment for nesting and foraging birds be conducted as part of the biological technical studies conducted in support of the Draft EIR.

Editorial Comments and/or Suggestions

Federally Listed Species: CDFW recommends consulting with USFWS regarding potential impacts to federally listed species including but not limited to the GKR, SJKF, and BNLL. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any Project activities.

Lake and Streambed Alteration: Based on aerial imagery, the Project site appears to contain features indicating multiple streams and drainages may be present. If streams, swales, or drainages occur on the Project site, Project activities may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation): (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral, intermittent, or episodic, as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement; therefore, if the Draft EIR approved for the Project does not adequately describe the Project and its impacts to lakes or streams, a subsequent CEQA analysis may be necessary for LSA Agreement issuance. For information on notification requirements, please refer to CDFW's website (https://wildlife.ca.gov/Conservation/LSA) or contact CDFW staff in the Central Region Lake and Streambed Alteration Program at (559) 243-4593 or R4LSA@wildlife.ca.gov. .

Artificial Lighting: Installation of outdoor artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for

communication, determining when to begin foraging, thermoregulation behavior, and migration (Longcore and Rich 2004, Miller 2006, Nightingale et al. 2006, Perry et al. 2008, Stone et al. 2009). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004). Project activities could result in disruption of wildlife behavior, inadvertent injury, or mortality.

CDFW recommends that the Draft EIR for the Project include an analysis of artificial lighting as it relates to biological resources and incorporate enforceable mitigation measures to decrease the impacts of artificial outdoor lighting on wildlife species. Potentially feasible mitigation measures include motion sensitive lighting; mounting light fixtures as low as possible to minimize light trespass; use of light fittings that direct and confine the spread of light downward; and use of long-wavelength light sources. In addition, CDFW recommends that lighting is not installed in ecologically sensitive areas (e.g., streams, wetlands, and habitat used by special status species, such as nesting/roosting sites and riparian corridors) and the use of the white/blue wavelengths of the light spectrum be avoided.

Wildlife Movement and Connectivity: The Project site and greater Project area appears to support significant biological resources and contains habitat connections and supports movement across the broader landscape, sustaining both transitory and permanent wildlife populations. CDFW recommends that on-site features that contribute to habitat connectivity should be evaluated and maintained. Aspects of the Project that could create physical barriers to wildlife movement, including direct or indirect Project-related activities, should be identified, and addressed in the Draft EIR. CDFW also recommends that the Draft EIR include language that all perimeter fencing be raised four to six inches above ground level and knuckled under to allow movement by wildlife, including SJKF, through the Project site and to minimize impacts to wildlife habitat connectivity. In addition, CDFW does not recommend the use of portals in the fence as a wildlife friendly design.

Project Alternatives Analysis: CDFW recommends that the information and results obtained from the biological technical surveys, studies, and analysis conducted in support of the Project's Draft EIR be used to develop and modify the Project's alternatives to avoid and minimize impacts to biological resources to the maximum extent possible. When efforts to avoid and minimize have been exhausted, CDFW advises that remaining impacts to sensitive biological resources be mitigated to reduce impacts to a less than significant level, if feasible.

Cumulative Impacts: CDFW recommends that a cumulative impact analysis be conducted for all biological resources that will either be significantly or potentially significantly impacted by implementation of the Project, including those whose impacts are determined to be less than significant with mitigation incorporated or for those

resources that are rare or in poor or declining health and will be impacted by the Project, even if those impacts are relatively small (i.e., less than significant). Cumulative impacts are recommended to be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the Project. An appropriate resource study area should also be identified and mapped for each resource being analyzed and utilized for this analysis. CDFW recommends closely evaluating the need for a cumulative impacts analysis for the following species as part of the Draft EIR due to these species being in poor or declining health or at risk: GKR, SJAS, SJKF, golden eagle, SWHA, TRBL, BNLL, CBB, AMBA, BUOW, mountain plover, northern harrier, San Joaquin coachwhip, western spadefoot, cackling goose, California horned lark, prairie falcon, California alkali grass, hispid salty bird's-beak, Hoover's eriastrum, Lemmon's jewelflower, and recurved larkspur. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the CNDDB. The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the County of Merced in identifying and mitigating Project impacts on biological resources.

If you have any questions, please contact Jeremy Pohlman, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (805) 503-2375 or by electronic mail at Jeremy.Pohlman@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

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Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: Zeta Solar Generation and BESS Project

SCH No.: 2023070088

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
Before Disturbing Soil or Vegetation	
SJKF	
Recommended Mitigation Measure 2: SJKF take authorization	
SWHA	
Recommended Mitigation Measure 3: SWHA surveys prior to construction	
Recommended Mitigation Measure 5: SWHA take authorization	
Recommended Mitigation Measure 6: SWHA foraging habitat mitigation	
BNLL	
Recommended Mitigation Measure 7: BNLL surveys prior to construction	
Recommended Mitigation Measure 9: BNLL take authorization	
CBB	
Recommended Mitigation Measure 10: CBB surveys prior to construction	
Recommended Mitigation Measure 12: CBB take authorization	
BUOW	
Recommended Mitigation Measure 13: BUOW surveys prior to construction	
Recommended Mitigation Measure 15: BUOW passive relocation and mitigation	
During Construction	
SJKF	
Recommended Mitigation Measure 1: SJKF avoidance buffer	
SWHA	
Recommended Mitigation Measure 4: SWHA avoidance buffer	
BNLL	
Recommended Mitigation Measure 8: BNLL avoidance buffer	
CBB	

Recommended Mitigation Measure 11: CBB avoidance buffer	
BUOW	
Recommended Mitigation Measure 14: BUOW avoidance buffer	